



newsletter on
life-cycle tools,
management and
product policy.

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The Environmental Crisis of the New Millennium: The Importance of Data and Evaluation

On September 15, 1999, in Nairobi, the United Nations Environment Program (UNEP) officially released its *Global Environmental Outlook 2000* (*GEO-2000*). Described by UNEP as "the most authoritative assessment ever of the environmental crisis facing humanity in

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the new millennium," the report drew on the input of UN agencies, 850 individuals, 30 environmental institutes and a survey of 200 scientists in 50 countries. The report is sobering.

In its analysis of both global and regional issues, *GEO 2000* concludes that: "The continued poverty of the majority of the planet's inhabitants and excessive consumption by the minority are the two major causes of environmental degradation. The present course is unsustainable and postponing action is no longer an option."

Global emissions of CO₂ reached a new high of nearly 23.9 billion tonnes in 1996 — nearly four times the 1950 total. In 1996, 25% of the world's 4,630 mammal species and 11% of the estimated 9,675 bird species were at a significant risk of total extinction. *GEO 2000* states that "full scale emergencies now exist in a number of fields." If present consumption patterns continue, by 2025, two out of every three persons will live in water-stressed conditions where the water cycle will be unable to meet demands.

Land degradation has negated many advances made by increased agricultural productivity. "Air pollution is at a crisis point in many major cities and global warming now seems inevitable."

While painting a very worrisome picture of the state of our Earth, and describing some depressingly large challenges for the future, UNEP does note that there have been some key environmental successes. For example, the Montreal Protocol on ozone depleting substances has been instrumental in the anticipated recovery of the ozone layer within the next 50 years. Without the Protocol, levels of ozone depleting substances would have been five times higher by 2050 than they are today.

GEO 2000 argues for a reinforcement of Agenda 21 and its call for environmental integration. "Institutions such as treasuries, central banks, planning departments and trade bodies frequently ignore sustainability questions in favour of short-term economic options. Integration of environmental thinking into the mainstream of decision-making relating to agriculture, trade, investment, research and development, infrastructure and finance is now the best chance for effective action." In the area of environmental management, *GEO 2000* notes that many of the world's major industries are reducing resource use and eliminating wastes. "The happy discovery that what is good for the environment can also be good for business may do much to reverse the trends for which industry itself was originally responsible."

Conversely, *GEO 2000* also argues that information on the current state of the environment is "riddled with weakness" and that there are few tools available to determine whether new environmental policies and expenditures have the desired effects.

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The report makes recommendations in four areas: filling the knowledge gaps; tackling root causes; taking an integrated approach; and mobilizing action. In the related areas of knowledge and integration, it is recommended that action be taken to:

- ◆ improve environmental data and information;
- ◆ evaluate policy performance;
- ◆ integrate the environment into mainstream thinking; and
- ◆ adopt integrated environmental management.

This issue of *Ecocycle* describes some of the work which is being done to help address the need for integration, and the need for data and information. The continued work of Canada's National Round Table on the Environment and the Economy (NRTEE) and the Global Reporting Initiative are two examples of critical initiatives which will address, at least in part, the recommendations of UNEP's *Global Environmental Outlook 2000*.

Ultimately, as we all know, and as UNEP has reinforced in its recommendations, you cannot manage what you cannot measure. Life cycle tools, life cycle management and product policies clearly have a major role to play to ensure that future global environmental outlooks are more positive than that recently released.

(UNEP's *Global Environmental Outlook 2000* may be read in summary form or in its entirety on their Web site <http://www.unep.org/unept/eia/geo2000>.)

We're Back!!!!

After a period of hiatus, *Ecocycle* has returned.

Environment Canada recognizes the importance of its commitment to help reduce environmental burdens associated with products throughout their life cycle and is aware of the role that *Ecocycle* has played in contributing to that commitment.

Over the last year and a half, due to changing priorities and limited resources, production of the newsletter was temporarily put on hold. During that time, a re-evaluation of the interest and need for *Ecocycle* was conducted. As a result of positive feedback, a significant

increase in subscriptions and a renewed commitment to advance product policies and life cycle management, Environment Canada is pleased to announce a renewed commitment to produce the newsletter on a biannual basis in both English and French.

Ecocycle will continue to focus on raising awareness and sharing information on policy and technical issues related to environmental Life Cycle Management (LCM) within Canada and abroad, and advancing tools and approaches to improving the environmental performance of product systems.

publisher's message

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A Perspective on ISO 14000

The ISO 14000 series standards, and in particular the use of ISO 14001, are generally defined as a systematic and universal means to implement sound environmental management policy and consequent actions. In addition to expected improvements in environmental performance and sustainability, the tool has important uses to improve industry efficiency, strengthen balance sheets, and promote innovation through the continual improvement requirement.

In Canada, nearly 60 companies with 97 sites currently have operational environmental management systems (EMS's) which are registered by third-party auditors as conforming to the requirements of ISO 14001 (see tables for additional details). And while many other companies have EMS's in conformance or otherwise with the standard, this information is not publicly shown or declared for corporate reasons. In addition, use of the self-declaration aspect of the standard is presently unused and unrecognized in Canada, although there is an indication that the establishment of an Internet-based registry, with a simplified audit control, would be of interest to many small to medium enterprises in Canada and elsewhere.

The use and diffusion of ISO 14000 varies worldwide. At present, both Canada and North America are below average in the purchasing of documents, the pick-up of ISO 14001 and/or the use of ISO 14004 for general guidance. While registrations do not tell the entire story (1% and

5% respectively for Canada and North America) there is a need to consider more active promotion, recognition, and possibly even use of incentive measures, by standards bodies, industry associations, banks, financial and insurance companies, and even large multi-national corporations with extended supplier and customer chains.

Insofar as governmental jurisdictions are concerned, the North American Commission on Environmental Cooperation (NACEC) adopted a Ministerial Resolution (97-05) in June 1997. This action recognizes voluntary EMS's, including the ISO 14001, as an effective and complementary means to enhance regulatory compliance and to improve industry environmental performance. At the same time, it clarifies that

adoption of an EMS pursuant to ISO 14001 does not by itself constitute or guarantee compliance with legal requirements, nor does it in any way prevent governments from taking enforcement action where appropriate. Further information regarding the NACEC's Environmental Enforcement and Compliance Cooperation program, and its EMS Working Group, may be found on the Commission's Home Page at <http://www.cec.org>.

Interestingly, two court actions in Canada in 1997 and 1998 (R vs. Prospec Chemicals; R vs. Coretec, Inc.) demonstrate court acceptance, and use by jurisdictions, of registration to ISO 14001 as one of a number of directed conditions to discharge non-compliances. The same pattern is beginning to occur in the U.S.

ISO 14001 REGISTRATIONS IN CANADA BY SECTOR

SECTOR	NUMBER OF COMPANIES	NUMBER OF SITES
Automotive	4	8
Chemicals	6	15
Specialty Chemicals	2	2
Manufacturing	24	36
Forestry and Pulp & Paper	12	23
Metals	1	1
Transportation	1	1
Utilities	3	4
Public Sector	2	3
Others	4	4
Totals	59	97

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Some provinces, and some states in the U.S., are using or reviewing the ISO standards as a tool to strengthen permitting schemes, and Nova Scotia Finance offers a tax credit for companies registered to ISO 14001.

Through the international standardization process (ISO/TC 207), a step was taken in June 1998 to review the ISO 14001 and ISO 14004 standards to improve their perceived incompatibility with the counterpart quality management system standards, ISO 9001 and ISO 9004. Through successive stages of review and possible revisions by international quality and environmental management systems experts, including a joint technical working group, it was recently decided (at the annual ISO/TC 207 meeting in Seoul, Korea, and at subsequent ISO meetings) that no significant incompatibilities exist and the two respective families could proceed and complete their revision cycles, in parallel, with regular, established liaison mechanisms.

Publication of new versions of the ISO 9000 standards is expected toward the end of 2000, while new versions of ISO 14000 will be published subsequent to 2000. As well, a new, common QMS-EMS auditing standard is also under development and may be published at the same time as the new ISO 9000 documents. Further details with respect to the compatibility of standards and other issues may be found in the Official Communiqué of the 7th Annual Meeting of ISO/TC 207 on Environmental Management, or at <http://www.iso.ch> — ISO's Internet Web site. For Canadian users, the Standards Council of Canada's (SCC's) Web site at <http://www.scc.ca> is also useful.

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ISO 14001 REGISTRATIONS IN CANADA BY JURISDICTION

JURISDICTION	NUMBER OF REGISTERED SITES
British Columbia	18
Yukon	—
Northwest Territories	—
Nunavut	—
Alberta	3
Saskatchewan	—
Manitoba	1
Ontario	48
Quebec	23
New Brunswick	1
Nova Scotia	2
Prince Edward Island	—
Newfoundland and Labrador	1
Canada	97

Strategic Issues in Waste Prevention: An OECD View*

Reality Check

Despite nearly 30 years of environmental and waste policy efforts in Organisation for Economic Co-operation and Development (OECD) countries, the OECD-wide increase in waste generation is still in 1:1 proportion to economic growth. A 40%

increase in OECD Gross Domestic Product (GDP) since 1980 has been accompanied by a 40% increase in municipal waste during the same period. Consumer spending also follows these trends.

According to OECD projections, there is expected to be a 70 to 100% increase in GDP by the

year 2020 in the OECD area. Certainly, it is not very pleasant to imagine a world where municipal waste generation is also 70 to 100% higher than the already high levels of today.

During the 1990s, most OECD Environment Ministries started embracing "source reduction" and "pollution prevention"

as key goals. This meant that as little waste as possible was to be disposed of, and this objective was to be achieved with a priority focus on prevention efforts, generally followed by recycling.

It has become clear that *in practice*, there exists a persistent prevention paradox. Overall, 65% of municipal wastes in OECD countries are still going for final disposal, and most public and private waste-related investment is directed to recycling, not prevention. Some estimates indicate that prevention accounts for a mere 10 to 20% of overall minimization efforts.

The scope of this dilemma is much broader than the generation of post-consumer municipal waste. Large increases in consumer demand can also imply more wastes associated with upstream activities such as extraction, manufacturing and distribution. Indeed, wastes are generated throughout the life of economic activities, through the flow of material cycles.

Slowly, increasing attention is being directed to those wastes generated at the *front-end* of the materials cycle. Recent work carried out by the World Resource Institute for four OECD countries (Germany, Japan, the United States and the Netherlands) indicates that hidden material flows from mining, earth moving and other sources account for as much as 75% of the total materials that these industrial economies use.

All these statistics beg the question: *Why do we have a waste dilemma?* While there are several reasons, at least four points merit special attention:

- ◆ Consumers and producers do not always pay the true social

and environmental costs of the wastes they generate;

- ◆ Increases in demand often outstrip any gains in production efficiency;
- ◆ It is often cheaper to use virgin materials than to recycle materials; and
- ◆ No agreed waste prevention indicators exist, and human psychology dictates that if something can not be measured, it's much less likely to get done!

Links to Other Challenges

Waste, as an environmental issue, takes many shapes and forms. This means that the problem must not be compartmentalized. Rather, it must be carefully integrated with decisions affecting all environmental media and all economic sectors. Integrated resource management can provide a useful stage for framing solutions to the dilemma.

However, we need to be realistic. Appropriate change in resource inputs does not come automatically at either the country or company level. For firms, the initial cost of redesigning products and minimizing resource use can be high, with lengthy timeframes for change. And the immediate benefits of such actions are often more public than private. The result can be insufficient private sector investment and inadequate innovation. OECD research is revealing that strategic waste prevention approaches, which can also include various product policies, can provide important levers for achieving efficiencies in materials and energy use throughout the

value-added chain of products. That, in turn, can help minimize negative externalities that have not always successfully been taken into account with historic waste management approaches.

A broad approach can help avoid secondary effects, some of which are familiar. For example, we know that landfills can give rise to groundwater contamination, increased truck transport to and from facilities, and public resistance to facility siting — the now familiar “not in my backyard” or NIMBY syndrome.

On a national and global level, there are also noteworthy areas of concern stemming from the fact that, traditionally, policies have not addressed the association between waste generation and issues such as climate change, deforestation, toxic substance releases, biodiversity loss and increased soil erosion.

Taking climate change as an example, we know that since 1990 *waste-derived methane* emissions have increased by almost 10% — a significant point because methane is approximately 24 times more potent a greenhouse gas (GHG) than carbon dioxide. Studies coming out of the U.S. clearly demonstrate a considerably higher GHG mitigation potential associated with waste prevention in comparison to any other waste minimization activity, including recycling.

From the OECD perspective, these simple but important observations have two overarching policy implications: (1) preventing wastes in the first place can also prevent the need for large financial outlays to fix secondary problems; and (2) only by nurturing and applying an integrated

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approach can we really start to understand and confront important linkages and trade offs.

Defining Success: A Caveat

As with any policy or program, there comes a time when its performance requires evaluation. However, there is a need to be vigilant in how we define success. If the measure of success of a waste prevention program is given only in terms of wastes not disposed of downstream, then it may come as no surprise that such a program looks expensive and perhaps even over-engineered. Only by taking into account the *full range of benefits* can governments and private organizations better understand the cost-saving, and innovation-enhancing potential of properly designed programs. Depending on the program, this fuller range of benefits can include reduced

upstream use of materials and energy use, better communication along the product chain involving all actors and, ultimately, a reduced need for public funds to finance waste management.

Policy Options and Indicators

To assist OECD governments with decoupling waste from wealth, two key aspects of OECD work on waste prevention include: 1) the preparation of a government policy options and self-assessment guide on strategic waste prevention (1999-2000); and 2) the development of the first international waste prevention performance indicators (2000-2001).

Resource Efficiency and Sustainable Development

Within the work program of the OECD Environment Directorate, efforts on strategic waste preven-

tion — as well as extended producer responsibility — are two of the components of a broad activity called resource efficiency which, in turn, is part of the broader work on sustainable development. The OECD as a whole has stepped up its work on sustainable development in a three-year horizontal program that will hopefully have a lasting impact.

* Adapted from a speech given by Joke Waller-Hunter, Director of the OECD Environment Directorate, at a recent OECD workshop on strategic waste prevention and related issues (May 4-7, 1999, Paris).

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OECD Extended Producer Responsibility Work Program Update

In 1994, the Organisation for Economic Cooperation and Development (OECD) initiated a work program to investigate the emerging policy of Extended Producer Responsibility (EPR). The work program has analyzed the legal and administrative aspects of EPR, prepared case studies, and reviewed the implementation of EPR, and the economic and environmental effectiveness of the approach.

During the final phase of the work program a series of international workshops were held. The first workshop was in Ottawa in December 1997, followed by workshops in Helsinki and Washington in 1998 and a final wrap-up workshop in Paris in May 1999. The EPR work program will conclude with the publication of an OECD *Guidance Manual for Governments* on the implementation of EPR.

The 1999 EPR workshop was held in conjunction with an OECD workshop on waste minimization to maximize the synergies between the two related issues. In the introductory joint session to the two workshops, Joke Waller-Hunter, Director, OECD Environment Directorate, noted that OECD data shows a continuing growth in waste generation in member countries in step with growth in Gross Domestic

Product (GDP) and population (see "Strategic Issues in Waste Prevention: An OECD View" on page 4 for a more detailed discussion of the presentation). Since 1980, there has been a 40% increase in OECD GDP accompanied by a 40% increase in waste during the same period. Overall consumer spending shows the same trend. The need to decouple these trends is emphasized by OECD economic projections which predict a 70 to 100% increase in OECD GDP by the year 2020.

One of the most valuable contributions to this EPR workshop and to the overall EPR work program was made by Gary Davis of the University of Tennessee, Center for Clean Product and Clean Technologies. He submitted the following list of guiding principles for the implementation of EPR and related product policy programs:

1. The extension of responsibility should be done in such a way as to create effective feedback to product designers that stimulates the design of cleaner products.
2. The policy should take a life cycle approach, and be directed at producing life cycle benefits, even if it focuses on end of life, so that environmental impacts are not increased or transferred somewhere else in the product chain.
3. There should be a well-defined focus of responsibility, so that the responsibility is not diluted out of existence.
4. The policy should be tailored to the specific attributes of the product system being targeted.
5. The extension of responsibility should be done in such a way as to increase communication among actors in the entire product chain about the life cycle impacts of the product.
6. The policy should stimulate innovation by a focus on results more than the means to achieve the result, thereby providing flexibility of implementation to producers.
7. There should be a means of assessing the environmental and economic results of the application of the policy and for modifying the policy to correct problems in implementation.
8. There should be balanced stakeholder input in the design of EPR policies, including input from all links in the product chain.
9. Voluntary measures should be considered, and if adopted, should at least include effective monitoring of results with the possibility of more intervention if the voluntary measures do not achieve policy objectives.
10. The design of EPR policies should involve consideration of market creation and consumer behaviour.

The OECD has indicated that a first draft of the EPR *Guidance Manual for Governments* will be completed by the end of 1999. It is anticipated that a final decision on its publication will be made at the spring 2000 meeting of OECD's Working Party on Pollution Prevention and Control (WPPC).

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Green Phone Project Update

Previously in *Ecocycle* (Issue no. 5, Winter/Spring 1997) a joint project between Nortel Networks and Environment Canada was discussed which analyzed the material, energy and environmental aspects of a common consumer product — the telephone. The objective of the project was to better understand the potential economic and environmental benefits of emerging environmental management concepts such as product Life Cycle Assessment (LCA) and Design for the Environment (DfE).

LCA is the preferred tool available today to scientifically assess the environmental performance of products. The goal of an LCA study is to measure, evaluate and report the resource requirements (raw materials and energy) and environmental emissions (to air, water and land) crossing the boundaries of a defined service system. In the case of a product LCA, the product system encompasses all processes from the extraction of raw materials, through manufacturing, to use and end-of-life activities.

DfE, or Ecodesign, is the integration of environmental considerations into product and process design. Fundamental to DfE is the use of tools and practices such as LCA that encourage environmental responsibility and simultaneously reduce costs, promote competitiveness and enhance innovation.

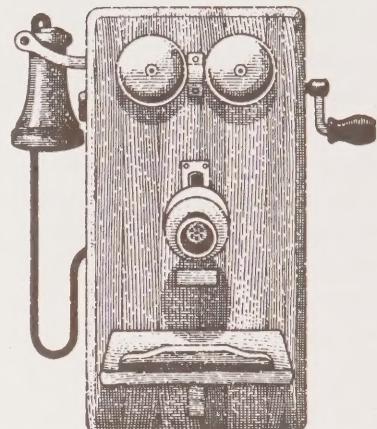
Companies and increasingly, national governments are utilizing and promoting these tools as a means of improving the environ-

mental performance of products. Since these tools also identify opportunities for improvements in energy and resource efficiency, they provide companies with a means to reduce costs and stimulate innovation.

Using the Nortel Networks M7310 Business Telephone as the functional unit, the study considered a number of potential improvement scenarios, including new keypad technology, thin-walled plastic housing and alternative end-of-life options. The indicators used to determine environmental impacts were global warming potential, raw material depletion potential, ozone depletion potential, air acidification potential and eutrophication potential.

A case study that describes the project goals, methodologies and results is nearing completion and will soon be available. Some of the project's findings are summarized as follows:

- ◆ The "use" phase of electronic products is often a key contributor to environmental impacts, because of the production of the electricity that is consumed. This indicates the potential environmental gains from designing features that "power down" electronic products when they are not in use, and using lower power integrated circuit technology, new design architectures and power factor correction techniques.
- ◆ The business case for improving the energy efficiency of products is generally favourable, since energy costs (including energy purchases, capital costs associated with providing reliable power, and capital costs associated with air conditioning and ventilation to remove waste heat) are often a significant part of the total cost of product ownership for customers. This may not be significant for a single telephone, but it is certainly the case for larger and more complex electronic products such as private branch exchanges or Central Office Switches.
- ◆ Integrated circuit (IC) manufacturing ranks first in terms of environmental impacts for the manufacturing stage. The fact that IC processing is complex and energy intensive should not come as a surprise to anyone involved in the field. What is surprising is that it often dwarfs other components on which LCA/DfE have traditionally placed an emphasis, such as plastic or metal housing, packaging and surface treat-



ments. Beyond its intriguing nature, this finding may encourage changes in how the electronics industry defines and designs its products.

- ◆ The proposed new keypad technology and thin-walled housing did not significantly affect the total life cycle impact, for all of the impact categories and inventory flows. However, the case for these scenarios can still be made in terms of reduced assembly and manufacturing costs (and potential ease of disassembly), and results point to how LCA can be used to complement other tools for an overall DfE approach.

In addition, the following observations emerged from the study:

- ◆ Life Cycle Assessment is a systematic and useful tool for identifying the largest environmental impacts of a product throughout its life cycle. It is particularly useful for putting these impacts in perspective and identifying the

most dominant. LCA results can be used to focus subsequent DfE efforts to ensure that limited resources are applied to a product's largest environmental burdens.

- ◆ To ensure relevance and management interest, the life cycle environmental analysis should be linked, as much as possible, to economic analysis. Further study is required to more fully understand the cost reduction opportunities that may arise from the study.
- ◆ The most challenging aspect of LCA is access to good data. Although the data is tracked, it is not collected centrally nor is it easily adapted for LCA purposes (e.g. environmental emissions from a site are not usually allocated to specific products). In addition, data collection from primary sources can be time consuming.
- ◆ Resource requirements for completing a LCA using the traditional methodology described can be high. Hence,

given that product development cycles in many industries are becoming shorter, it may not be realistic to include traditional LCA as part of a "live" product development process. Rather, LCA should be seen as an "off-line" DfE tool for identifying key strategies and guidelines for next generation product design. This underscores the ongoing need for simple and sophisticated DfE tools that can be easily integrated into existing design processes.

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Eco-efficiency Indicators Study

Canada's National Round Table on the Environment and the Economy (NRTEE), with the cooperation of the World Business Council for Sustainable Development (WBCSD), and the active participation of eight companies,¹ has carried out a feasibility study on indicators for energy and material intensity. This has yielded many practical lessons and insights of value to those who

develop and implement eco-efficiency indicators. Indicators for energy efficiency — energy consumed per unit of output — have been found to be readily and widely applicable and meaningful. Indicators for material intensity — materials consumed per unit of output — have also been found to be feasible, but are more relevant in some industry sectors than others. Practical issues concerning

implementation and interpretation have been identified for both energy and material intensity indicators. The stage is set for broader testing and demonstration of these indicators.

¹ Participating companies included 3M Canada, Alcan Aluminium, Bell Canada, Monsanto, Noranda Mining and Exploration, Nortel Networks, Procter & Gamble, and Pacific Northern Gas (representing Westcoast Energy).

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In addition, options for pollutant dispersion indicators were evaluated at a pre-feasibility study stage.

The companies made valuable progress toward the selection of a suite of issues-related pollutant dispersion indicators that would be meaningful, widely applicable and scientifically acceptable. Feasibility testing of selected components from a set of pollutant dispersion indicators would be a useful next step.

The NRTEE's goal for this study was to explore the feasibility of designing and implementing meaningful and robust indicators for three of the elements of eco-efficency.² In setting this goal, the NRTEE recognized that eco-efficency is a practical approach that businesses are adopting in setting and achieving their environmental performance objectives. The development of ways to measure and report eco-efficency is therefore an important aspect of the evolution of this approach.

Eco-efficency indicators should be reliable signposts and triggers for dialogue and further

enquiry. They should not be expected to measure and communicate all aspects and details of environmental performance, whether at the corporate, division, facility or product level. Other indicators and data, such as absolute quantities, or communication of the particular context may also be necessary. Eco-efficency indicators, when combined with other information, should assist company managers, their boards of directors and external stakeholders in tracking progress toward environmental performance targets. These indicators should facilitate comparison of performance between companies and across sectors. Care must be taken to avoid selecting indicators that are ambiguous or may lead to adverse results in other aspects of eco-efficency.

The study approached indicator design in a flexible manner by selecting a few minimum indicators and including some complementary ones where more complete information was required. Testing and evaluation of the indicators focused on their technical feasibility — such as the required degree of precision and availability of data, the clarity of decision

rules, definitions and compilation procedures — and on interpretation issues (i.e. the meaning that may be ascribed to the indicators by users).

The final report, *Measuring Eco-efficency in Business: Feasibility of a Core Set of Indicators* is available through Renouf Publishing Co. Ltd., Ottawa, Ontario.

For more information on the NRTEE's work with eco-efficency, please visit the NRTEE Web site at <http://www.nrtee-trnee.ca> or contact:

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² According to the definition developed by the World Business Council for Sustainable Development. See NRTEE, *Backgrounder: Measuring Eco-efficency in Business* (Ottawa, 1997).



The Global Reporting Initiative: Sustainability Reporting Guidelines

In March 1999, the product of an unusual initiative was released at a major corporate reporting conference in London, England. An “exposure draft” of Sustainability Reporting Guidelines, developed by the Global Reporting Initiative, was distributed for general comment and pilot testing by companies and other interested parties around the world.

What is Sustainability Reporting?

Sustainability Reporting provides information about the three areas associated with the concept of sustainable development as it pertains to enterprise performance — economic, social and environmental — and the relationships between these areas.

Economic performance encompasses conventional financial reporting from the perspective of providers of financial capital, typically shareholders, as well as other activities such as contributions made by the enterprise to the wider economy (e.g. taxes paid, payroll and purchases in the community). Social performance includes treatment of minorities and women, use of child labour, employment practices and other societal impacts, locally and globally. Environmental performance includes all the ecological impacts related to the manufacture, delivery and use of products and services, affecting air, water, land, natural resources, flora and fauna.

There is increasing evidence on all continents that companies

committed to both sustainable development and their external stakeholders are gaining interest in understanding the three areas of sustainability performance and are taking them into account in their decision making. A considerable number of companies worldwide have begun to measure and report on sustainability or certain aspects of it. But, despite these initiatives — which span several countries, regions and sectors — there is no widely or internationally accepted framework of environmental or social performance measures and reporting practices to permit meaningful comparisons between companies or provide the rigour and reliability associated with financial reporting.

The Global Reporting Initiative (GRI) and its Draft Guidelines

To meet this increasingly important need, the GRI draft Guidelines provide a framework and a format for compiling and presenting information (quantitative and qualitative) about a company’s performance in the three areas of sustainable development. They also explore how the company integrates consideration of these areas into its decision making and business practices.

The aim of the GRI is to elevate sustainability reporting to a level equivalent to, and as routine as, financial reporting in terms of comparability, auditability and

generally accepted practices. At the heart of the Guidelines are the reported indicators and other information, described under nine major headings with specific explanations and guidance for compiling and presenting the information under each heading.

The GRI was established in late 1997 to design widely applicable guidelines for preparing enterprise-level sustainability reports — in effect to create a basis for standardized reporting that would allow comparisons between companies and bring greater rigour, quality and credibility to such reporting. Its creation has encouraged the active participation and collaboration of several major corporations, non-governmental organizations (including the Coalition for Environmental Responsible Economies¹ [CERES]), accountancy organizations (including the Canadian Institute of Chartered Accountants), business associations and other interested parties from around the world, such as the United Nations Environment Program (UNEP) and the World Business Council for Sustainable Development.

The GRI’s agenda includes creating linkages with other organizations that have established or are working on environmental and

¹ CERES founded and serves as convenor of the GRI until a permanent, institutional host organization has been established for ongoing stewardship of the GRI Guidelines.

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social responsibility standards, such as ISO 14000 and SA 8000². Also, a GRI working group is studying the verifiability of sustainability reports and their eventual implementation, taking into account the range of stakeholder expectations regarding credibility and verification, and other relevant initiatives already underway.

The draft Guidelines are intended to encourage wide public review and comment by the end of 1999, and to allow some 20 companies an opportunity to test the applicability and feasibility of the Guidelines in the same timeframe. The GRI working group then plans to revise the draft Guidelines based on the feedback received and re-issue a new version early in

2000. The "exposure draft" Guidelines are but a first step in a journey of continuous learning and development, the importance of which is reflected in the April 1999 letter from the Executive Director of UNEP, Dr. Klaus Topfer, to Environmental Ministers in every country around the world. His letter announced the release of the Guidelines and encouraged Ministers to engage companies in using and advancing the Guidelines.

Where to obtain the Guidelines

The GRI Sustainability Reporting Guidelines, and further information, can be accessed at <http://www.globalreporting.org>. Alternatively, copies are available upon request from:

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² For more information on SA 8000 standards of the New York and London based Council for Economic Priorities, see <http://www.cepa.org>.

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